CLAIMS:

1. A method of synthesizing of a speech signal, the speech signal having at least a first speech unit and a second speech unit, the method comprising the steps of:

- providing a first speech unit signal, the first speech unit signal having an end interval,
- providing a second speech unit signal, the second speech unit signal having a front interval,
- appending of at least some of the periods of the end interval in inverted order at the end of the first speech unit signal to provide a fade-out interval,
- appending of at least some of the periods of the front interval in inverted order at the beginning of the second speech unit signal to provide a fade-in interval,
- superposing of the end and fade-in intervals and of the fade-out and front intervals.

2. The method of claim 1, whereby the end and front intervals have approximately steady periods.

3. The method of claim 1 or 2, the end and front intervals being identified by a marker.

4. The method of claim 1, 2 or 3, whereby the last period of the end interval and the first period of the front interval are not appended.

5. The method of any one of the preceding claims 1 to 4, further comprising windowing of the end and/or fade-out intervals with a fade-out window.

6. The method of claim 5, whereby a raised cosine is used as a fade-out window.

7. The method of claim 6, whereby the following window function is used for voiced intervals:

$$w[n] = 0.5 - 0.5 \cdot \cos\left(\frac{\pi \cdot (n + 0.5)}{m}\right), \qquad 0 \le n < m$$

where m is the total number of periods in a smoothening range.

8. The method of claim 5, whereby a sine window is used as a fade-out window for unvoiced intervals.

9. The method of claim 8, whereby the following window function is used:

$$w[n] = \sin\left(\frac{0.5 \cdot \pi \cdot (n+0.5)}{m}\right), \qquad 0 \le n < m \qquad (2.7)$$

where m is the total number of periods in a smoothening range.

10. The method of any one of the preceding claims 1 to 9, the first and second speech units being diphones and/or triphones and/or polyphones, in particular words.

11. The method of any one of the preceding claims 1 to 10, further comprising adapting the durations of the end and fade-in intervals and of the fade-out and front intervals.

12. The methods of any one of the preceding claims 1 to 11 whereby the speech signal is synthesized by means of an overlap and add operation.

13. Computer program product, in particular, digital storage medium, comprising program means for synthesizing of a speech signal, the speech signal having at least a first speech unit and a second speech unit, the program means being adapted to perform the steps of:

- providing a first speech unit signal, the first speech unit signal having an end interval,
- providing a second speech unit signal, the second speech unit signal having a front interval,
- appending of at least some of the periods of the end interval in inverted order at the end of the first speech unit signal to provide a fade-out interval,
- appending of at least some of the periods of the front interval in inverted order at the beginning of the second speech unit signal to provide a fade-in interval,
- superposing of the end and fade-in intervals and of the fade-out and front intervals.

14. Computer system, in particular text-to-speech system, for synthesizing of a speech signal, the speech signal having at least a first speech unit and a second speech unit, the computer system comprising:

- means for storing of a first speech unit signal, the first speech unit signal having an end interval, and for storing of a second speech unit signal, the second speech unit signal having a front interval,
- means for appending of at least some of the periods of the end interval in inverted order at the end of the first speech unit signal to provide a fade-out interval,
- means for appending of at least some of the periods of the front interval in inverted order at the beginning of the second speech unit signal to provide a fade-in interval,
- means for superposing of the end and fade-in intervals and of the fade-out and front intervals.